

IN THE CLAIMS:

Please amend the claims as follows:

1. (Cancelled)
2. (Cancelled)
3. (Cancelled)
4. Cancelled)
5. (Cancelled)
6. (Cancelled)
7. (Cancelled)
8. (Cancelled)
9. (Cancelled)
10. (Cancelled)
11. (Cancelled)
12. (Cancelled)
13. (Cancelled)
14. (Cancelled)
15. (Cancelled)
16. (Cancelled)
17. (Cancelled)

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18. (Currently Amended) A diamond heat spreader comprising:
- a chemical vapor deposited diamond layer ~~exhibiting roughness on at least one~~ having an unpolished free surface thereof; and
- a covering layer adhered to the ~~at least one~~ free surface of the diamond layer and having ~~at least one respective~~ a thermal coupling surface exhibiting ~~at least one of~~ a predetermined roughness ~~and~~ and/or a predetermined flatness, the covering layer having a thickness just enough to cover a roughness of the free surface of the diamond layer.
19. (Currently Amended) The diamond heat spreader of claim 18, wherein the covering layer comprises a layer of metal on the ~~at least one~~ free surface of the diamond layer, the layer of metal defining ~~at least one respective~~ a polished metal surface ~~having the at least one predetermined roughness and predetermined flatness.~~
20. (Currently Amended) The diamond heat spreader of claim 19, wherein the covering layer further comprises a final layer on the ~~at least one respective~~ polished metal surface, the final layer defining the ~~at least one respective~~ thermal coupling surface.

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21. (Original) The diamond heat spreader of claim 20, wherein the final layer comprises a layer made of at least one of Au, Ni and Ag.
22. (Currently Amended) The diamond heat spreader of claim 20, wherein the at ~~least one~~ respective thermal coupling surface has ~~pre-selected~~ regions made of different metals.
23. (Currently Amended) The diamond heat spreader of claim 19, wherein the covering layer further comprises an adhesion layer disposed directly on the at ~~least one~~ free surface of the diamond layer such that the adhesion layer adheres to the ~~at least one~~ free surface of the diamond layer and supports the layer of metal thereon.
24. (Original) The diamond heat spreader of claim 23, wherein the covering layer further comprises a barrier layer disposed between the adhesion layer and the layer of metal.
25. (Original) A heat spreader package comprising the diamond heat spreader of claim 18, and further including a heat sink thermally coupled to the diamond heat spreader.

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26. (Currently Amended) The heat spreader package of claim 25, further comprising a load distribution lid ~~connected~~ thermally coupled to the heat sink and to the diamond heat spreader.
27. (Original) The heat spreader of claim 25, further comprising a load distribution perimeter connected to the diamond heat spreader, wherein the diamond heat spreader and the perimeter together form a load distribution lid thermally coupled to the heat sink.
28. (Original) A microelectronic package comprising the heat spreader package of claim 25, and further including a die package having a die and a land grid array thermally and electrically coupled to the die, the heat spreader package being thermally coupled to the die package.
29. (Currently Amended) A diamond heat spreader comprising:
a chemical vapor deposited diamond layer having an unpolished free surface; and
means adhered to ~~at least one~~ the free surface of the diamond layer for providing ~~at least one respective~~ a thermal coupling surface of the heat spreader, the means for providing having a thickness just enough to cover the roughness of the free surface of the diamond layer.

30. (Cancelled)

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